



# **Coordination Group Role for the New Datums**

**FGDC Coordination Group**

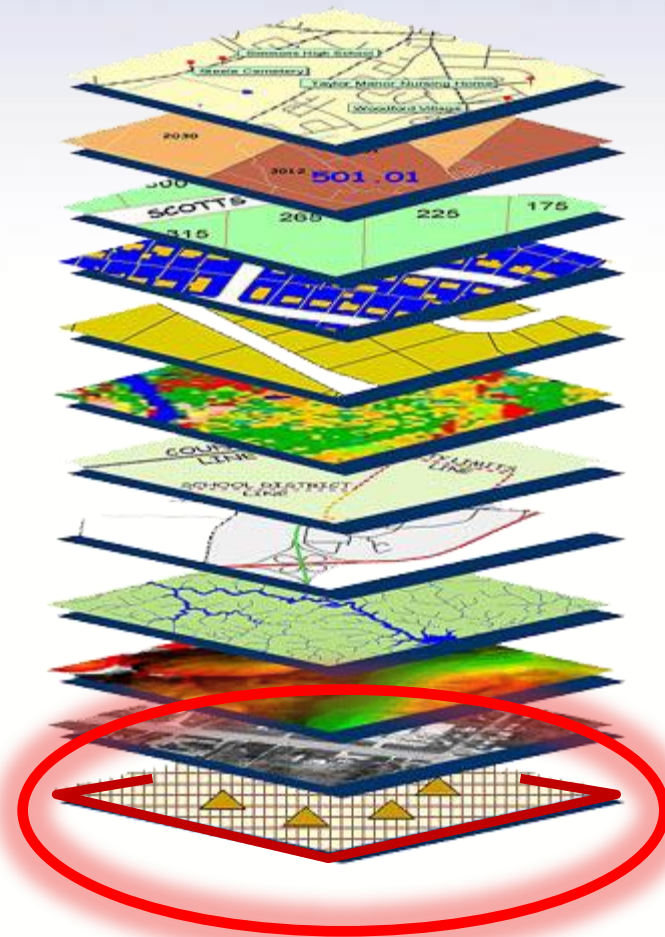
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**Director**

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**NOAA's National Geodetic Survey**

# Role of Geodetic Control

- **Geodetic control** provides a common reference system for establishing coordinates for all geographic data.
- All **NSDI framework data** and users' applications data require geodetic control to accurately register spatial data.
- The **National Spatial Reference System** is the fundamental geodetic control for the United States.
- A geodetic **datum** is an abstract coordinate system with a reference surface (such as sea level) that serves to provide known locations to begin surveys and create maps.

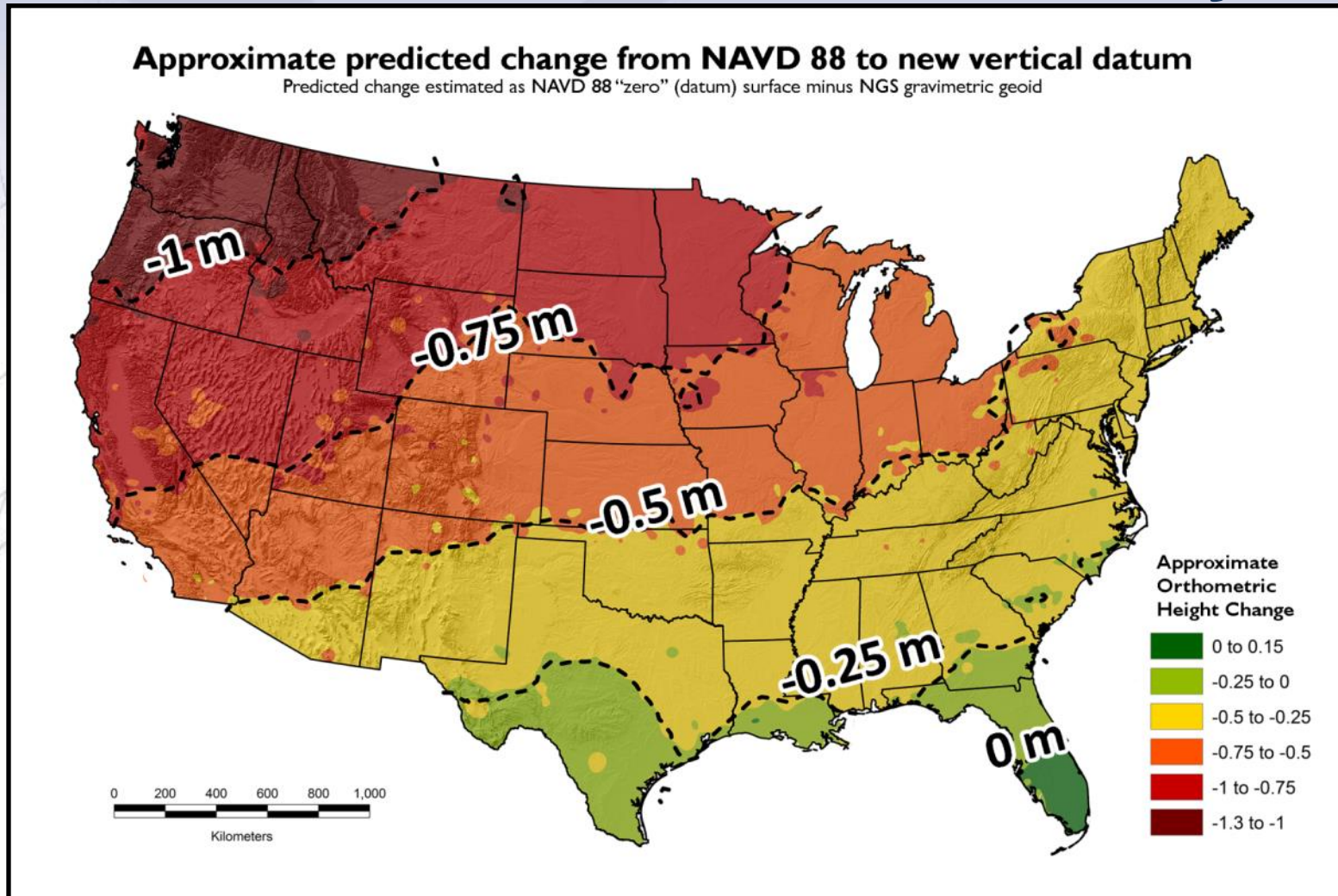


# What's Next for Geodetic Datums?



[What's Next for Geodetic Datums? \(Video link\)](#)

# How will the new datums affect you?



The **new vertical** (geopotential) **datum** will change heights on average **50 cm** with a **1 m** tilt towards the Pacific Northwest.



# The NSRS Supports:



## **National Oceanic and Atmospheric Administration**

NSRS positioning data provides the reference for **NOAA's nautical charts**, among many other geospatial applications.



## **Federal Emergency Management Agency**

FEMA uses NSRS elevations to **determine flood zones** for the National Flood Insurance Program.



## **United States Army Corps of Engineers**

USACE uses NSRS elevations to **determine levee heights** and positions in their Levee Safety Program.



## **United States Geological Survey**

USGS uses the NSRS to geospatially reference their **Topographic maps and interior water data** for the nation.



## **National Geospatial-Intelligence Agency**

NSRS gravity data contributes to **NGA's geospatial mission**.

# 2015 Geospatial Summit

**Now online** - videos and presentations

<http://www.geodesy.noaa.gov/2015GeospatialSummit/>

**NGS Webinar Series:**

[http://www.ngs.noaa.gov/web/science\\_edu/webinar\\_series/](http://www.ngs.noaa.gov/web/science_edu/webinar_series/)

**August 2015** - Summary report will be published online

**September 10, 2015** - NGS Webinar topic will be “De-briefing the Geospatial Summit”



# Benefits of the New Datums

## **USGS**    **Improved 3DEP and other topographical products**

*More accurate representation of the physical world in our elevation (and other georeferenced) products*

## **FEMA**    **More accurate horizontal and vertical coordinates for NFIP**

*NFIP requires thousands of precise horizontal and vertical measurements of buildings to know where water will flow during floods*

## **USACE**    **Consistency of vertical datums across the country**

*Improved accuracy of GPS derived elevations and a better relationship between geodetic and hydrologic datums to manage levies and waterways*

## **FAA**    **More closely aligns US NAS to global system (WGS 84)**

*Improved horizontal and vertical coordinates for airport obstacles*

## **NGA**    **More closely aligned with WGS 84 and ITRF**

# Feedback

## Tools, Products and Services Requested:

- Major need for **user-friendly** transformation tools and routines
  - Ensure ease of integration into commercial GPS and geospatial software
  - Include accuracy of information

## Outreach Requested:

- Sample language for state governments to update legislation references to NAD 83 (in collaboration with National Society of Professional Surveyors)
- Consistent communication through Geospatial Summits, webinars, etc.
- More training and tutorials covering geodesy basics and specifics on datum transformations for used by geomatics schools and programs
- A formal publication describing the expected difference between NAD 83, NAVD 88 and the new datums



# How can you prepare?

## **Procedures and Workflows:**

- Analyze current procedures and workflows
- Create plans for adjusting future data collection, including contract language

## **Data:**

- Maintain raw data collected today for transformations to the new datums in the future
- Ensure proper metadata for current data and planned data collection to ensure the proper transformations will be used in the future
- Share information with NGS so we can understand agency challenges in converting current data to new datums

# How can you prepare?

Watch for **upcoming NGS status updates** via conferences, reports, webinars.

## NGS Webinar Series:

[http://www.ngs.noaa.gov/web/science\\_edu/webinar\\_series/](http://www.ngs.noaa.gov/web/science_edu/webinar_series/)

**Understand the impact** of changing positions and heights for your community, company, or agency.

**We're here to help!**

## New Datums Webpage:

<http://www.geodesy.noaa.gov/datums/newdatums/NewDatums.shtml>

**NGS Info Center:** [ngs.InfoCenter@noaa.gov](mailto:ngs.InfoCenter@noaa.gov)

## Find a Geodetic Advisor:

<http://www.geodesy.noaa.gov/ADVISORS/AdvisorsIndex.shtml>

**NGS Contact Information**

General questions about NGS, its publications, and other products can be submitted to the NGS Communications and Outreach Branch Services via:

- E-mail: [communications@noaa.gov](mailto:communications@noaa.gov)
- Telephone: (301) 713-3242
- Fax: (301) 713-4172, or
- Postal Mail: Communications and Outreach Branch, NOAA, NINGS12 National Geodetic Survey, SSMC3 #6202 1315 East-West Highway Silver Spring, MD 20910-3282

**Related Links:**

- NGS Organization Chart
- NOAA Personnel Locator

For questions or comments about a particular NGS program or activity, consult the table below for contacts and additional information. If you prefer contacting NGS other than via the email link, please consult the [NGS organization chart](#) or [personnel directory](#).

Visitors in search of directions, parking, and other information may find the following link helpful: <http://www.nws.noaa.gov/files/ssmcomaps.pdf>

NGS Help Resources		
Area in which you need HELP	Contact	Helpful Links/More Info
Antenna Calibration	E-mail	<a href="#">main page</a>
CORS Program	E-mail	<a href="#">main page</a> <a href="#">overview</a>
Crustal Motion	E-mail	<a href="#">main page</a>
Downloading Aeronautical Data	E-mail	<a href="#">main page</a> <a href="#">overview</a>
Downloading Data Sheets	E-mail	<a href="#">main page</a>
Federal Geodetic Control Subcommittee	E-mail	<a href="#">main page</a>
Geodetic Field Parties Survey Schedules	E-mail	<a href="#">main page</a> <a href="#">overview</a>
GPS Archived Project Data	E-mail	<a href="#">main page</a>
GPS Orbit Data	E-mail	<a href="#">main page</a> <a href="#">overview</a>
Height Modernization Activities	E-mail	<a href="#">main page</a> <a href="#">overview</a>
Horizontal Datums	E-mail	<a href="#">conversions</a>
National Shoreline	E-mail	<a href="#">main page</a> <a href="#">overview</a>
NGS Geoid and Gravity Team	Geoid contacts	<a href="#">main page</a>
NGS Training Center	E-mail	<a href="#">main page</a> <a href="#">schedule</a>
NGS Workshop Calendar	E-mail	<a href="#">main page</a>
NOAA Aircraft Remote Sensing Survey Schedules	E-mail	<a href="#">main page</a>
NOAA Shoreline Data Explorer	E-mail	<a href="#">main page</a>
OPUS -- The Online Positioning User Service	E-mail	<a href="#">main page</a> <a href="#">overview</a>
Remote Sensing Projects	E-mail	<a href="#">main page</a>
State Advisors	E-mail	<a href="#">main page</a>
Vertical datums	E-mail	<a href="#">conversions</a>

Website Owner: National Geodetic Survey / Last modified by Vicki Veilleux Feb 27 2014

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# New Datums are coming in 2022!

- Both a new **geometric** and a new **geopotential** (vertical) datum will be released in **2022 following FGCS approval**.
- **NGS will provide the tools** for geospatial users to easily transform between the new and old datums.
- **FGDC** plays integral role in **raising awareness and preparing constituents**.



# What can FGDC do?

- **Support NGS and FGCS**
- **Serve as central contact**
- **Inform others**
- **Promote and include in strategic plans**
- **Provide feedback**